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The extended, relativistic hyperon star model.

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abstract In this paper an equation of state of neutron star matter which includes strange baryons in the framework of Zimanyi and Moszkowski (ZM) model has been obtained. We concentrate on the effects of the isospin dependence of the equation of state constructing for the appropriate choices of parameters the hyperons star model. Numerous neutron star models show that the appearance of hyperons is connected with the increasing density in neutron star interiors. Various studies have indicated that the inclusion of δ meson mainly affects the symmetry energy and through this the chemical composition of a neutron star. As the effective nucleon mass contributes to hadron chemical potentials it alters the chemical composition of the star. In the result the obtained model of the star not only excludes large population of hadrons but also does not reduce significantly lepton contents in the star interior.